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मानक

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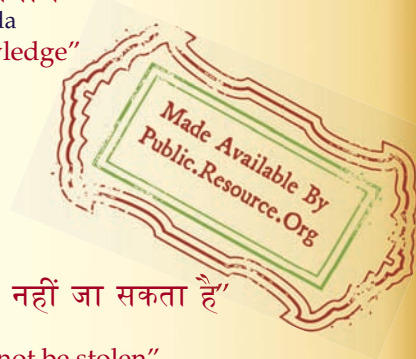
IS 12978 (2006): Commercial Vehicles and Buses -
Cross-tooth Gearbox Flanges - Type T [TED 2: Automotive
Primemovers]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

व्यावसायिक वाहन और बसें — क्रॉस-टूथ गियर बॉक्स
फलेंज, टाइप टी

(पहला पुनरीक्षण)

Indian Standard

COMMERCIAL VEHICLES AND BUSES —
CROSS-TOOTH GEARBOX FLANGES, TYPE T

(*First Revision*)

ICS 43.040.50

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BUREAU OF INDIAN STANDARDS

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NEW DELHI 110002

NATIONAL FOREWORD

This Indian Standard (First Revision) which is identical with ISO 8667 : 1992 'Commercial vehicles and buses — Cross-tooth gearbox flanges, type T' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Automotive Primemovers Transmission and Steering Systems and Internal Combustion Engines Sectional Committee and approval of the Transport Engineering Division Council.

The Sectional Committee decided to align the Indian Standard with the corresponding International Standards wherever feasible and wherever the domestic considerations were not so intense as to have standards different from the ISO Standards. This decision was taken with a view to upgrade the quality of the products in line with the International Standards.

This standard was first published in 1990 under dual number. The first revision was undertaken due to revision to base standard ISO 8667 : 1986. The following technical changes were incorporated:

- a) Change in designation instead of size code it is now size d_1 .
- b) Dimensions and tolerances of the mating parts are left to the discretion manufacturer of that component.
- c) Dimensions d_6 is deleted and tolerance and is changed from ± 0.5 to 0 and -1 .
- d) Notes given under table of earlier International Standard are deleted.

The text of the ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their places are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 1101 : 1983 Technical drawings — Geometrical tolerancing — Tolerance of form, orientation, location and run-out — Generalities, definitions, symbols, indications on drawings	IS 8000 (Part 1) : 1985 Geometrical tolerancing on technical drawings: Part 1 Tolerances of form, orientation, location and run-out and appropriate geometrical definitions (<i>first revision</i>)	Identical
ISO 7646 : 1986 Commercial vehicles and buses — Gearbox flanges — Type A	IS 12902 : 1990 Commercial vehicles and buses — Gearbox flanges — Type A	do
ISO 7647 : 1986 Commercial vehicles and buses — Gear flanges — Type S	IS 12903 : 1990 Commercial vehicles and buses — Gearbox flanges — Type S	do

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

**COMMERCIAL VEHICLES AND BUSES —
CROSS-TOOTH GEARBOX FLANGES, TYPE T**

(First Revision)

1 Scope

This International Standard specifies the nominal dimensions and tolerances which affect interchangeability between cross-tooth gearbox flanges, type T, and mating parts used on commercial vehicles and buses.

2 Dimensions and tolerances

Nominal dimensions and tolerances which affect the interchangeability of type T gearbox flanges shall be as shown in figure 1 and table 1.

Where the flange is formed by forging, an additional groove either side of the driving teeth is permissible. In this case the additional grooves do not form part of the drive.

Dimensions and tolerances of the mating parts, other than those occurring at the interface of the two

flanges, are left to the discretion of the manufacturer of that component.

3 Designation

Gearbox flanges meeting the requirements of this International Standard shall be identified by a certain number of elements, to be given in the following order:

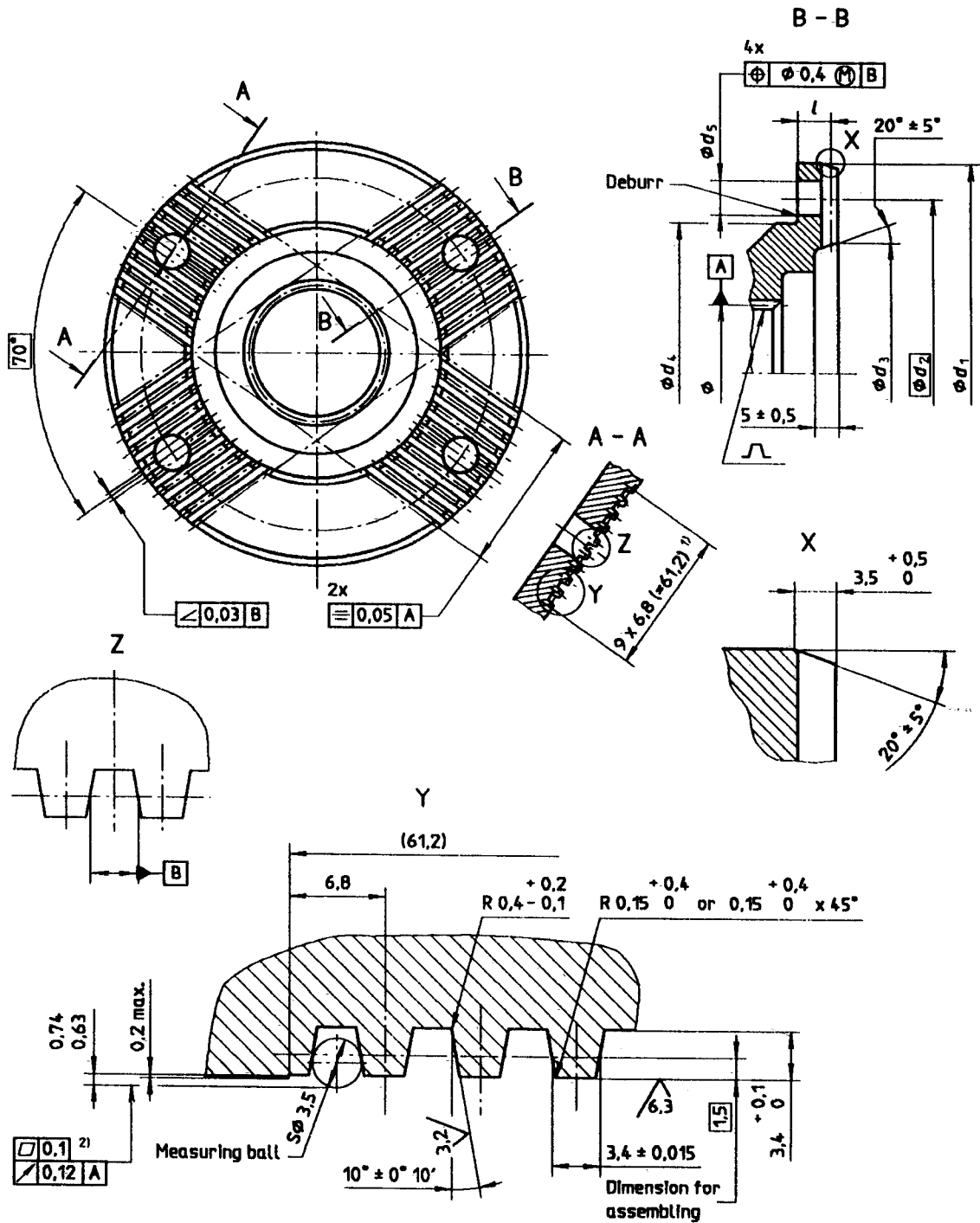
- a) reference to this International Standard;
- b) type code: T;
- c) size: d_1 .

EXAMPLE

Designation of a type T gearbox flange with $d_1 = 150$ mm:

Flange ISO 8667 - T 150

Dimensions in millimetres,
surface roughness values in micrometres



Adjacent pitch error 0,02
Cumulative pitch error 0,04
Tooth to tooth pitch error 0,02

- 1) See table 1, footnote 2).
2) For comparative measurements, flatness shall be measured at a minimum distance of 5 mm from the diameter d_5 hole and at the outside edges for diameters d_1 and d_3 . Run-out shall be measured on the diameter d_2 circle, at a minimum distance of 5 mm from the diameter d_5 hole.

Figure 1

Table 1

Dimensions in millimetres

Size d_1 0 -1	d_2	d_3 $\pm 0,5$	d_4 ¹⁾ 0 -0,2	d_5 $+0,2$ 0	l 0 -0,5
120 ^{2), 3)}	100	82	83	11	10
150 ³⁾	130	102	111	13	12
165	140	112	121	13	12
180	150	112	128	15	14
200	165	132	143	15	16

1) This dimension shall be applied when required to prevent bolt heads from rotating.

2) Seven grooves are optionally permitted for size 120. In this case, the width of the tooth segment shall be $7 \times 6,8 = 47,6$ mm instead of $9 \times 6,8 = 61,2$ mm.

3) For certain applications, diameters $d_1 = 122$ mm and 155 mm may be required subject to agreement between manufacturer and customer.

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Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards : Monthly Additions'.

This Indian Standard has been developed from Doc : No. TED 2 (423).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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